



- Previous concepts
- Product Policies
- Audit Procedures
- Conclusions



■ DEVELOPING PRODUCT DESIGN AUDIT PROCEDURES

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IFORS TRIENNIAL CONFERENCE

■ STRATEGIC INDUSTRIAL SECTORS

- Previous concepts
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- Arts and Crafts
- Automobile
- Wood
- Clothing
- Naval Construction
- Telecommunications
- Energy

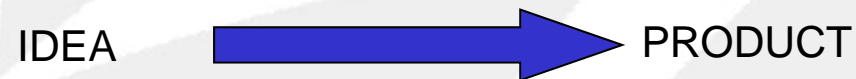


■ MARKET SITUATION

- **Previous concepts**
 - **Product Policies**
 - **Audit Procedures**
 - **Conclusions**
- Competence increasing
 - Product complexity is increasing
 - Product Life cycles are decreasing
 - Increasing need for innovation
 - Increasing need for implementing design methodologies
 - Lack of knowledge about design management

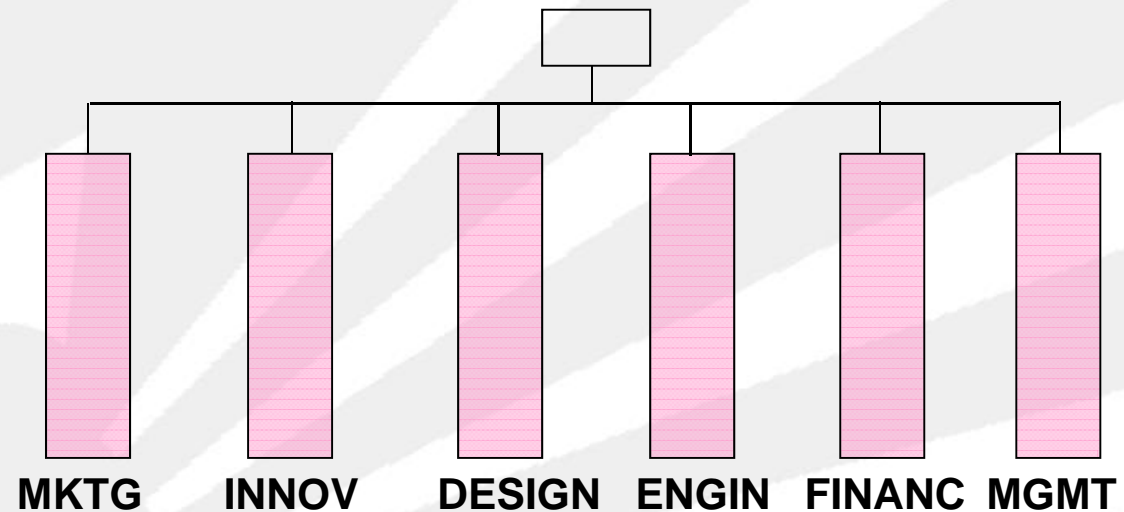
DEVELOPING PRODUCT DESIGN AUDIT PROCEDURES

■ PRODUCT STRATEGY



- Previous concepts
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Different areas of the organization participate in the process



PROBLEM: COORDINATION?

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■ MARKETING

- Previous concepts
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- Market Research
- Business Opportunities detection
- Market tests

Marketing Mix development:

Product
Promotion
Price
Place



■ INNOVATION

- Previous concepts
 - Product Policies
 - Audit Procedures
 - Conclusions
- Existing products redesign
 - New Product Design
 - New Concept development
 - Technology innovation



■ DESIGN

- Previous concepts
 - **Product Policies**
 - Audit Procedures
 - Conclusions
- New concept development
 - Creativity, and product development
 - Materials
 - Manufacturing processes
 - Customer needs
 - Regulations
 - Etc.



■ ENGINEERING

- Previous concepts
- **Product Policies**
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- Technical specifications, and maps
- Shapes
- Molds
- Manufacturing procedures
- Cost analysis



■ FINANCE

- Previous concepts
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- Budget analysis
- Total costs, and unitary costs
- Income preview
- Margin analysis
- Pricing
- Budgetary control



■ MANAGEMENT

- Previous concepts
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- Product Portfolio
- Interdisciplinary process
- Design and development management

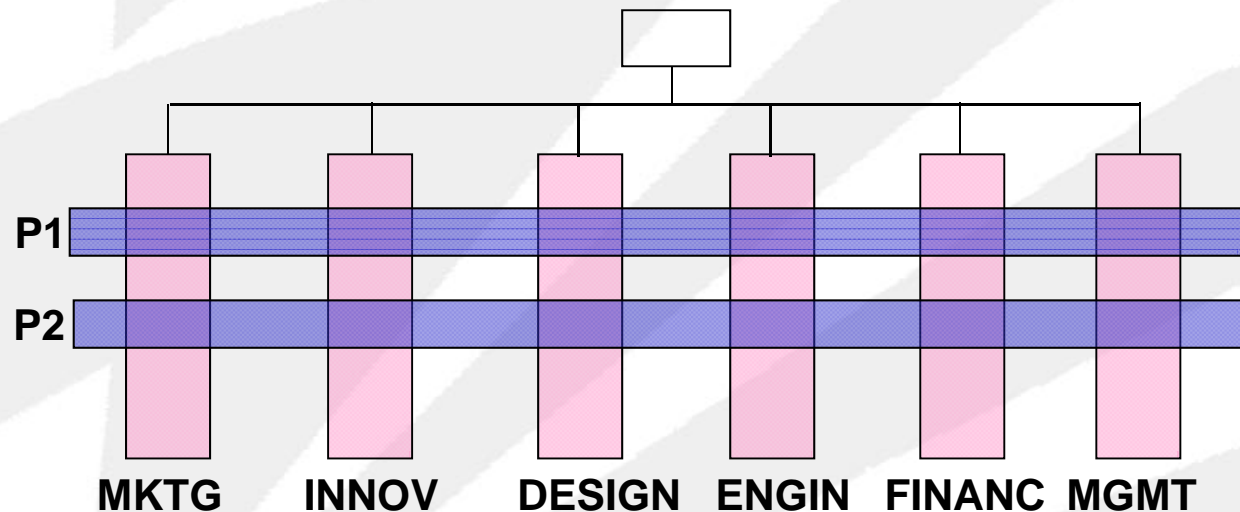


- Resources management
- People Management
- Activities Management



IT IS NECCESARY TO COORDINATE EVERYTHING

- Previous concepts
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It is necessary to adopt organizational structures to manage product innovation

“Product managers”

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Strategic Level

“It is necessary to reinforce innovation via:

- Searching for an adequate environment
- Searching for time in the decision level
- Assuming commitment by the highest level of the organization”

Operational Level

It is necessary to manage innovation by means of a good planning, and project management.

■ NEW PRODUCT DESIGN AND DEVELOPMENT MODELS

- Previous concepts
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- It must be organized
- It must include different approaches:

Function based models

Activity based models

Decision based models

Respond Models

Conversion Models

- Every company and situation require from different approaches



■ IDEAL MODEL

- Previous concepts
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- Explicit model
- Divided into different phases
- Innovation focused
- Planned and managed
- Interdisciplinary model
- Customer oriented model
- Holistic Approach



■ AUDIT PROCEDURES

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ENVIRONMENT

**THREATS
OPPORTUNITIES**

COMPANY

**WEAKNESSES
STRENGTHS**



It is necessary to find the strategic balance between all.

■ CONCLUSIONS

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- Audit Procedures
- **Conclusions**

- We have developed an **Audit Manual** to analysis de SWOT in the design and development procedures
- We have implemented these procedures to a number of **100 businesses** in North West Spain,
- We have detected a number of weaknesses in the companies analyzed related to:
 - Lack of methodologies**
 - Lack of control** during the process
 - Occasional** stimulus for innovation
- We are now implementing **improvement policies** within these companies by:
 - Including **systematic methodologies**
 - Creating an **adequate atmosphere** for innovation
 - Managing** innovation